

# CHANGE: DEALING WITH A ROOT CAUSE OF PATIENT SAFETY ACCIDENTS

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How does a healthcare delivery system implement change management principles across all services and corporate initiatives and, more importantly, integrate those changes with local, unit-driven change at the sharp end of the healthcare system? Management of these changes is intended to reduce the amount of distraction and subsequently the probability of patient safety accidents. This paper traces the Children's Hospitals and Clinics – Minneapolis/St Paul journey of its change protocol.

Change as a condition for patient safety accidents.

Healthcare is a decision-intense industry. Few industries have so many front-line (i.e. "sharp end") employees empowered to make so many high-risk decisions throughout an entire shift of duty. For decision intense environments it is appropriate to consult cognitive decision-making literature to identify root causes in patient safety accidents. This literature identifies attention and situational awareness as critical success factors in constant high-risk decision environments. Simpson and Knox in their article "Adverse Perinatal Outcomes & Preventing Common Accidents" document many of these factors in the real-world setting. Cognitive factors such as the following are often identified as contributors to error:

Stress & fatigue

Unfamiliarity with the task; trying something new under pressure

- Information overload
- Workload & multi-tasking
- Doing more with less resources
- Production vs safety
- Task saturation
- Task prioritization

Children's Hospitals and Clinics of Minneapolis/St Paul Minnesota (Children's) combined this literature with an analysis of data contained in its "story-based" qualitative data base of patient safety learning reports. The results confirm that attention, or more precisely distraction, is a cause of many patient safety accidents and near-misses. Further, the analysis indicates that the volume and velocity of change is a root cause of error.

The Sources of Change

It is easily arguable that the sharp end of healthcare delivery systems face a greater deluge of change than other industries. Some of the sources driving the change come from the following (and other) external forces:

Accreditation and compliance:

- New knowledge / education;
- Clinical Technology advances;
- Information Technology (IT) improvements;
- Medication breakthroughs;
- Best practice knowledge sharing.

What happens when this change is implemented at the sharp end without adequate coordination? The healthcare provider is often buried in an avalanche of change that contributes to the error factors previously identified. The system's objective then becomes to transition from the picture on the left of Figure 1 to that on the right.

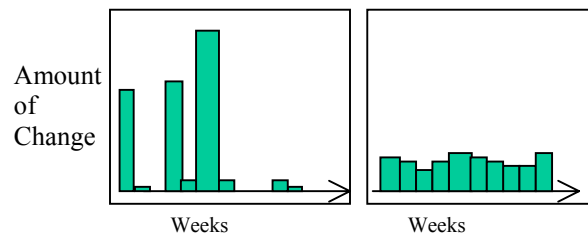


Figure 1: The Current and Desired States

If you look within functional/support departments in healthcare, you find most of them have created processes to smooth change over time. It's when you look across those functions that the problems surface.

Change management in healthcare: blunt versus sharp end

The amount and degree of change affecting the sharp end of healthcare demands that rigorous change management processes be enforced to create stability and order. Yet the terms stability, order, and "steady-state" are seldom associated with the seemingly amorphous sharp end of the health delivery system. However, these terms are not foreign to ancillary service components of healthcare delivery systems (e.g. facilities, IT, materials). By their nature these functional support areas operate in a more structured environment allowing them to effectively and efficiently use change management principles within their domain. Table 1 provides a

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brief overview of the change management inherent at the blunt end.

Table 1: Change management at the Blunt End

BLUNT END DOMAIN	INHERENT CHANGE PROCESS
Facilities	Construction templates & blueprints
IT	Structured project management
Materials & Equipment	Value analysis
Education	Curriculum development

Each of the processes identified in Table 1 is structured and disciplined to include implementation and communication plans. These implementation plans assess the project stakeholders and the training/education required for the implementation to be effective. Each of these domains perform effective design and implementation planning to insure success of the projects within their domain. The challenge to healthcare systems is “Who in the organization insures successful planning across all domains, including local unit-level changes?”

Combining blunt and sharp end awareness of pending changes in a less-rigorous change protocol to smooth change at the sharp end.

Due to its importance to patient safety, Children’s launched an initiative with two objectives:

1. Create a process that smoothes the amount of change affecting sharp-end units; and
2. Reflect those changes in a change impact calendar accessible by both the sharp and blunt ends for use in implementation planning.

In 2001, triggered by

- Major Patient Safety push and nurse recognition of the correlation of change velocity to patient safety accidents;
- Complaints about the amount of change expected at the sharp end;
- Literature indicating distraction as a root cause of patient safety accidents; and
- Analysis of the safety learning report database,

Julie Morath, the COO and CNE, launched the effort to achieve the objectives. This effort, using the traditional healthcare “policies and procedures” approach, bogged down in committee and stalled for four reasons:

1. No logical champion/owner (i.e. nobody other than leadership had a scope covering the breadth and depth of the issue/process);

2. The perceived resource requirements were too large for anyone to request in a time of diminishing resources;

3. The details overwhelmed the committee members;

4. Children’s had a scheduled JCAHO accreditation visit; and

5. The unrecognized new dynamic required for this to be successful: rather than system driven it had to be sharp-end governed.

The journey to smooth change at the unit level was at a halt, but the issue wasn’t. It was continuing to fester and the sores were getting worse.

During this same period, Julie initiated an effort to re-build the Quality program at Children’s. One component of that re-construction was the creation of a Performance Improvement Department. The scope of that department was to improve the following processes:

- Measurement;
- Accreditation readiness;
- Process re-engineering; and
- Project management.

Once that department had established its credibility, it became the natural owner of the new Change Protocol because it had both the breadth of responsibility and the skills required to accomplish the task. When no other department raised its hand to accept the task, the PI Department added this challenge to its process responsibilities.

### Initial Steps

It was recognized that the success of this effort depended on:

- Starting with a “middle-out” approach
  - Tap into existing structured change management processes and insure the information from these existing blunt end functions flowed to the calendar; and
  - Contact all managers, directors and professional staff committees to create a common conceptual model and expectations.
- Preparing the organization for an evolutionary process, foreign to traditional Policies and Procedures development.

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Once the initial orientation was complete, the tasks focused on:

- Creating a working group that would be responsible for assessing impact and “de-conflict” implementation timing overlaps;
- Determining and communicating scope of what changes needed to be reflected on the change calendar;
- Determining the process and authorities for resolving prioritization conflicts; and
- Establishing an enforcement mechanism.

### Current Status

1. Search for a tool that could be used to manage this task resulted in a “solution staring us in the face”. To date there have been no show-stoppers for MicroSoft Project.
2. Change requests are flowing from blunt-end domains resulting in a change calendar that allows them pro-active assessment and coordination of large projects.
3. Minimal local/unit-level change awareness is contained in the calendar because the knowledge of the effort remains in middle-management. The launch of the “bottom-up” communication blitz will occur at the time this paper is finalized.
4. The “de-confliction” mechanism, especially to provide rapid intervention, has yet to be tested. There is direct correlation of this capability to a key component of Children’s patient safety plank: its “stop-the-line” policy.
5. Work on access to the calendar will also be evolutionary, starting with intranet access by managers on their web page. to be replaced by MS Project snapshot reports.
6. More structured and semi-structured domains have been added:
  - Education,
  - Policies and Procedures,
  - Compliance, and
  - Research.
7. There is a degree of comfort on the part of the working group that this project will be manageable when “steady state” is achieved. The deluge of awareness from the “bottom up” will task the process for several months and then reach manageable levels.
8. The working group has now turned its attention toward its biggest challenge: How to assess the degree of impact for any given change and how to aggregate that change (i.e. creating the images of Figure 1, both at the organizational and unit levels)? Using the cognitive literature, Children’s has chosen as its unit of measure for impact the degree of cognitive resource required for the change. Children’s initial attempt is to use its education

framework as a simple tool to assess cognitive impact. Is the impact one of:

- Communication /awareness?;
- Comprehension /understanding?; or
- Competency/skills ?

### Lessons Learned to Date

- Originally local, unit-level changes were outside the scope of the change protocol. This decision was reversed during the first week of the effort because in many cases these local changes (e.g. a local competency effort) required the entire change impact allotment for that unit for that given week.
- Creating the conceptual picture is not as easy as it looks. What measurement do you aggregate to create the image of Figure 1? You cannot plan or design this element of the process. This component of the change protocol process will be the biggest challenge to evolutionary design and expectation management. Children’s will mature into accurate judgments of impact.
- Leadership follow-through is a key.
- Owners of change initiatives don’t get concerned until coordination affects the timing of their change.
- Capturing and documenting all the change occurring in an organization (i.e. creating a base to achieve steady-state) is not easy. Middle-out must be augmented by bottom-up awareness.
- To be effective effort must have a granularity of unit by week. Maintenance of this calendar is time consuming. What starts as a single row entry projection of change “sometime in the 4<sup>th</sup> quarter” eventually becomes a row-entry for each unit in every given week. The detail often is not identified until “just in time” (or in some cases, too late for effective coordination).
- Bottom-up awareness and participation is essential, especially to mature the judgments of impacts.

### Conclusions

The change protocol process and calendar has many positive effects. To be successful in such an endeavor an organization must:

1. Keep it simple;
2. Involve every level of the organization;
3. Dedicate resources with breadth of awareness;
4. Manage expectations and professional staff concerns about bureaucracy; and
5. Approach this task not as a project but as a culture change.

References

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